Patent
Attorney Docket No. 024444-917

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

s/a
K. Cobb
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In re Patent Application of	)	
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Håkan ERICKSSON et al.	)	Group Art Unit: 3722
	)	
Application No. 09/838,305	)	Examiner: Brian D. Walsh
	)	
Filed: April 20, 2001	)	Confirmation No. 1853
	)	
For: CUTTING TOOL SYSTEM AND MECHANISM FOR ACCURATELY POSITIONING A CUTTING EDGE	)	

AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Official Action dated September 17, 2002, please amend the above-captioned application as follows.

IN THE DESCRIPTION:

Page 7, replace Paragraph [0033] as follows:

[0033] Fig. 4 illustrates a cutting tool and tool block according to the invention. The cutting tool 1 comprises a substantially cylindrical shaft portion 3 and a front portion 9. Said front portion carries a cutting insert 5 having at least one cutting edge 7. Alternatively, the cutting edge could be integral with, e.g., machined in, the shaft portion 3. The upper envelope surface of the shaft is equipped with a recess 21 in the form of a groove of V-shaped cross-section (see Fig. 7), which runs parallel with the longitudinal center axis of the bar. The groove has a symmetrical cross sectional form comprised of two downwardly converging side surfaces which, as seen in cross section, are of equal length. The outer diameter of the cylindrical part of the cutting tool is denoted "d". The tool block 15 features an aperture 23, which runs the entire length of the block with openings both at the front, and rear surfaces 53, 55. The diameter D of the aperture 23 is somewhat larger than the outer

diameter "d" of the cutting tool. A longitudinal split 19 links the bore to one of the side surfaces 57 of the tool block along the entire length of the tool block. One or more holes extend from the upper surface 63 of an upper portion 60 of the tool block and run vertically downwards through the split 19 and into a lower part 61 of the block. The lower part of each hole is threaded to enable a clamp actuator in the form of a screw 65 to be passed downwardly through the upper part of each hole (disposed in the upper part 60 of the block 59) and screwed into the lower part 61 of the hole. The action of these screws forces the parts 60, 61 of the block together thus reducing the effective diameter "D" of the aperture, for clamping the cutting tool accommodated in said bore. Furthermore the tool-clamping device 15 features a bore 45 running vertically downwards from the upper surface of the block 63 and opening up in the aperture 23 which accommodates the bar. Said bore is located close to the front edge of the block where the upper surface 63 meets the front face 53. The center line of the bore 45 intersects the center line CL2 of the aperture 23. This bore 45 accommodates a spring-loaded device 30, which is illustrated in more detail in Fig. 6. The groove 21 interacts with the spring-loaded device to give a slight but significant increase of the force required to rotate the cutting tool around its center longitudinal axis as it passes the point of interaction (i.e., the point where the spring-loaded device engages the recess 21). Once the correct rotational location has been thus established by "feel", the cutting tool is clamped in the damping device by tightening the screws 65.

Page 10, replace paragraph [0037] as follows:

[0037] Figs. 5, 5a and 5b illustrate the invention as used in an arrangement that is especially suited for modern machine tools. In this case the clamping block comprises a sleeve 47 that has been introduced between the bar and a tool adaptor 49. The sleeve is designed to accommodate a spring-loaded device 30, as also is the adaptor in exactly the same manner as described above in connection with Fig. 4. As described previously the spring-loaded device is used only to give an indication of a required position prior to clamping the cutting tool. In this solution

clamping is carried out with the help of the screws 165, which lock the sleeve in position through interaction with the planar surface of a whistle notch 50 of the sleeve 47 and at the same time exert a pressure on the sleeve causing the slit 190 to narrow, hence clamping the cutting tool in the sleeve.